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Terms: **patno=6015299** ([Edit Search](#))

*120485 (00) 6015299 January 18, 2000*

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

**6015299**

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January 18, 2000

Card edge connector with symmetrical board contacts

**REISSUE:** January 17, 2002 - Reissue Application filed Ex. Gp.: 2839; Re. S.N. 10/051,925 (O.G. January 7, 2003)

**INVENTOR:** Walse, Alan S., LaGrange, IL; Lang, Harold Keith, Fox River Grove, IL; Panella, Augusto P., Naperville, IL; Triner, Irvin R., Willowsprings, IL; Tung, Shyh-Lin, Taiping, TW

**APPL-NO:** 120485 (00)

**FILED-DATE:** July 22, 1998

**GRANTED-DATE:** January 18, 2000

**ASSIGNEE-AT-ISSUE:** Molex Incorporated, Lisle, IL

**ASSIGNEE-AFTER-ISSUE:** August 31, 1998 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., MOLEX INCORPORATED CHARLES S. COHEN 222 WELLINGTON COURT LISLE ILLINOIS 6053 2, Reel and Frame Number: 009435/0421

**LEGAL-REP:** Cohen, Charles S.

**PUB-TYPE:** January 18, 2000 - Utility Patent having no previously published pre-grant publication (A)

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patno=6015299

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Selected file: PLUSPAT

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Query/Command : us6015299/pn

\*\* SS 7: Results 1

Search statement 8

Query/Command : prt fu legalall max

1 / 1 PLUSPAT - @QUESTEL-ORBIT - image  
PN - US6015299 A 20000118 [US6015299]  
TI - (A) Card edge connector with symmetrical board contacts  
PA - (A) MOLEX INC (US)  
PAO - Molex Incorporated, Lisle IL [US]  
IN - (A) WALSE ALAN S (US); LANG HAROLD KEITH (US); PANELLA AUGUSTO P (US); TRINER IRVIN R (US); TUNG SHYH-LIN (TW)  
AP - US12048598 19980722 [1998US-0120485]  
PR - US12048598 19980722 [1998US-0120485]  
IC - (A) H01R-009/09  
EC - H01R-023/00B  
H01R-023/70B  
PCL - ORIGINAL (O) : 439060000  
DT - Corresponding document  
CT - USRe26692; US3196377; US3199066; US3399372; US3539976; US3573704; US3871728; US4419626; US4461522; US4548452; US4552420; US4705332; US4707039; US4886474; US4891023; US4917616; US4950172; US4973260; US5024609; US5026292; US5035631; US5035632; US5051099; US5071371; US5082459; US5096435; US5098306; US5156554; US5158471; US5161987; US5162002; US5192220; US5224867; US5249988; US5259768; US5259793; US5309630; US5336111; US53376012; US5393234; US5522737; US5580257; EP414495 A1; EP436943 A1; EP472203 A1; JP58-19884; JP4-79177; JP4-147577; JP4-55764; TW280041; WO9204745  
Markstein, "Packaging for High-Speed Logic," pp. 48-50, Electronic Packaging & Production, Sep. 1987.  
STG - (A) United States patent  
AB - A card edge connector for mounting on a circuit board and removeably receiving a circuit card includes an elongated housing defining a card receiving slot. Numerous terminal receiving cavities intersect and extend to both sides of the slot. Alternate cavities include stamped reference (ground or power) terminals and signal terminals, all having downwardly extending board contacts and upwardly extending spring arms. There are numerous similar sets of face to face contacts, each including a reference contact parallel to and substantially overlying an opposed pair of signal contacts. The upwardly extending reference terminal spring arms include oversize pad portions for reducing crosstalk by increasing coupling between the reference and signal terminals. The circuit paths to the circuit board are in an array symmetrical about the centerline of the circuit card, with parallel inner lines of circuits containing only reference contacts and outer lines of circuits containing only signal contacts.

2/10/04

US 6,015,299

10/051925

1 / 1 LGST - ©EPO  
PN - US6015299 A 20000118 [US6015299]  
AP - US12048598 19980722 [1998US-0120485]  
ACT - 20030107 US/RF-A  
REISSUE APPLICATION FILED  
EFFECTIVE DATE: 20020117  
UP - 2003-22

1 / 1 CRXX - ©CLAIMS/RRX  
AN - 3269405  
PN - 6,015,299 A 20000118 [US6015299]  
PA - Molex Inc  
PT - M (Mechanical)  
ACT - 20020117 REISSUE REQUESTED  
ISSUE DATE OF O.G.: 20030107  
REISSUE REQUEST NUMBER: 10/051925  
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2839

Reissue Patent Number:

UP - 2003-02  
UACT- 2003-01-07

Query/Command : fam us6015299/pn

1 Patent Groups  
\*\* SS 8: Results 6

Search statement 9

Query/Command : famstate nonstop

1 / 6 PLUSPAT - ©QUESTEL-ORBIT - image  
PN - EP0975055 A1 20000126 [EP-975055]  
STG - (A1) Public. Of applic. With search report  
TI - (A1) Card edge connector  
OTI - (A1) Connecteur de bord de carte  
(A1) Leiterplatterandverbinder  
PA - (A1) MOLEX INC (US)  
IN - (A1) WALSE ALAN S (US); LANG HAROLD KEITH (US); PANELLA AUGUSTO  
P (US); TRINER IRVIN R (US); TUNG SHYH-LIN (TW)  
IC - (A1) H01R-012/18 H01R-024/00  
LA - ENGLISH (ENG)  
AP - EP99114374 19990722 [1999EP-0114374]  
PR - US12048598 19980722 [1998US-0120485]  
EC - H01R-023/00B  
H01R-023/70B  
DS - AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE  
AL LT LV MK RO SI  
DT - Basic

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PN - EP0975055 A1 20000126 [EP-975055]  
AP - EP99114374 19990722 [1999EP-0114374]  
ACTE- 20000126 EP/AK-A [+]

DESIGNATED CONTRACTING STATES:  
DE FR GB IE IT NL

20000126 EP/AX-A [+]  
EXTENSION OF THE EUROPEAN PATENT TO  
AL;LT;LV;MK;RO;SI

20000913 EP/17P-A [+]  
REQUEST FOR EXAMINATION FILED  
EFFECTIVE DATE: 20000719

20001011 EP/AKX-A [+]  
PAYMENT OF DESIGNATION FEES  
DE FR GB IE IT NL

20021016 EP/18W-A [-]  
WITHDRAWN  
WITHDRAWAL DATE: 20020821

UP - 2003-22

2 / 6 PLUSPAT - ©QUESTEL-ORBIT - image  
PN - JP2000100503 A 20000407 [JP2000100503]  
STG - (A) Doc. Laid open to publ. Inspec.  
TI - (A) CARD EDGE CONNECTOR  
PA - (A) MOLEX INC  
PAO - (A) MOLEX INC  
IN - (A) LANG HAROLD KEITH; PANELLA AUGUSTO P; TUNG SHYH-LIN; TRINER  
IRVIN R; WALSE ALAN S  
IC - (A) H01R-012/16 H01R-012/18 H01R-107:00  
PN2 - JP3185055 B2 20010709 [JP3185055]  
STG2 - (B2) Grant. Pat. With A from 2500000 on  
IC2 - (B2) H01R-012/18  
AP - JP23874799 19990722 [1999JP-0238747]  
PR - US12048598 19980722 [1998US-0120485]  
UP - 2000-22

3 / 6 PLUSPAT - ©QUESTEL-ORBIT  
PN - KR2000011884 A 20000225 [KR2000011884]  
STG - (A) Unexamined patent application  
TI - (A) CARD EDGE CONNECTOR  
PA - (A) MOLEX INC (US)  
IN - (A) PANELRA AUGESTOPY (US); TRINNERBIN AL (US); WALS ANENES  
(US); TUNGSH-RIN (US); RANG HEROLD KISS (US)  
IC - (A) H01R-023/68  
AP - KR9929685 19990722 [1999KR-0029685]  
PR - US12048598 19980722 [1998US-0120485]  
UP - 2002-35

4 / 6 PLUSPAT - ©QUESTEL-ORBIT  
PN - SG73664 A1 20000620 [SG--73664]  
STG - (A1) Patent Application  
TI - (A1) Card edge connector  
PA - (A1) MOLEX INC  
IN - (A1) WALSE ALAN S; LANG HAROLD KEITH; PANELLA AUGUSTO P; TRINER  
IRVIN R; TUNG SHYH-LIN  
IC - (A1) H01R-009/09  
AP - SG9903624 19990722 [1999SG-0003624]

2/10/04

US 6,015,299

10/051925

PR - US12048598 19980722 [1998US-0120485]  
UP - 2000-49

5 / 6 PLUSPAT - @QUESTEL-ORBIT  
PN - TW433643 Y 20010501 [TW-433643]  
STG - (Y) Granted utility model  
TI - (Y) Card edge connector  
PA - (Y) MOLEX INC (US)  
IN - (Y) TUNG SHYH-LIN (TW); LANG HAROLD KEITH (US); PANELLA AUGUSTO  
P (US); TRINER IRVIN R (US); WALSE ALAN S (US)  
IC - (Y) H01R-023/70  
AP - TW88212265U 19990721 [1999TW-U212265]  
PR - US12048598 19980722 [1998US-0120485]  
UP - 2001-42

6 / 6 PLUSPAT - @QUESTEL-ORBIT - image  
PN - US6015299 A 20000118 [US6015299]  
STG - (A) United States patent  
TI - (A) Card edge connector with symmetrical board contacts  
PA - (A) MOLEX INC (US)  
PAO - Molex Incorporated, Lisle IL [US]  
IN - (A) WALSE ALAN S (US); LANG HAROLD KEITH (US); PANELLA AUGUSTO P  
(US); TRINER IRVIN R (US); TUNG SHYH-LIN (TW)  
IC - (A) H01R-009/09  
AP - US12048598 19980722 [1998US-0120485]  
PR - US12048598 19980722 [1998US-0120485]  
EC - H01R-023/00B  
H01R-023/70B  
PCL - ORIGINAL (O) : 439060000  
DT - Corresponding document

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PN - US6015299 A 20000118 [US6015299]  
AP - US12048598 19980722 [1998US-0120485]  
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